

REMARKS

The Final Office Action mailed February 24, 2004 has been received and carefully reviewed. Claims 1-28 and 37-41 are pending in the application. Claims 5, 6, 12-14, 19, 20, 26-28, 38, 39, and 41 were objected to but would be allowable if rewritten in independent form. Claims 1-4, 7-11, 15-18, 21-25, 37, and 40 remain rejected. Independent claims 1, 15, and 37 have been amended. Reconsideration of the application as amended and allowance of the claims as amended are respectfully requested in view of the amendments to the claims and the following remarks.

Claims 1, 2, 4, 7, 8, 15, 16, 18, 21, 22, 37, and 40 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,850,079 to *Warman et al.* Claims 3, 9, 10, 11, 17, 23, 24, and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Warman et al.*

Applicant submits that the amendments provided herein should be entered, as the amendment places the case in condition for allowance, and adopts suggestions tacitly made by the Examiner to incorporate distinctive features argued by Applicant explicitly into the language of the claims. M.P.E.P. §714.12-13.

In particular, the Examiner indicates in the Office Action that the claims do not contain the requisite language concerning the delay of atrial arrhythmia therapy to the extent argued by Applicant. While Applicant respectfully submits that the claims as originally filed are not anticipated by or rendered obvious in light of the asserted reference, *Warman*, the arguments made by the Applicant, now reflected more explicitly in the language of the amended claims as suggested by the Examiner, clearly place the application in condition for allowance.

Applicant appreciates the Examiner's Response to Arguments that facilitate a better understanding of the Examiner's concerns regarding the pending claims in view of *Warman*. Applicant has amended independent claims

1, 15, and 37 to recite, in various forms, the feature of inhibiting delivery of pacing signals to the atrium and inhibiting delivery of atrial arrhythmia therapy in response to the detected high atrial interval rates. Independent claims 1, 15, and 37 have been further amended to recite, in various forms, the feature of detecting atrial intervals while inhibiting delivery of the pacing signals to the atrium and inhibiting delivery of the atrial arrhythmia therapy.

Inhibiting delivery of both atrial pacing signals and atrial arrhythmia therapy ensures that no pacing signals are delivered to the atrium during evaluation of the detected high atrial interval rates. Inhibiting atrial pacing signal delivery in the claimed manner advantageously increases the speed of atrial detection and confirmation operations/decisions, as is supported in the following excerpt of Applicant's specification (page 11, line 23 – page 12, line 9):

It has been found by the inventors that conventional treatment therapies that involve atrial pacing to regulate atrial activity in response to certain atrial arrhythmias may have the unintended effect of slowing the atrial arrhythmia detection and confirmation process. In particular, it has been determined by the inventors that delivery of atrial pacing during the atrial arrhythmia detection and confirmation process results in a reduction in the rate at which atrial arrhythmia detection can be accomplished.

An atrial arrhythmia detection methodology of the present invention advantageously avoids processing of slow atrial intervals and, as a result, arrives at a detection decision at an increased speed relative to conventional detection techniques. An atrial arrhythmia detection methodology of the present invention provides for increased atrial arrhythmia detection and confirmation by inhibiting atrial pacing during a time in which the atrial arrhythmia is evaluated. Inhibiting atrial pacing during such period of evaluation advantageously prevents the occurrence of slow atrial intervals.

As was previously argued by Applicant, *Warman* discloses a system and method for delivering treatment for atrial tachyarrhythmia immediately after the atrial tachyarrhythmia is detected. For example, *Warman* teaches that:

If atrial fibrillation is detected, the device begins timing a first time interval 506, during which the device delivers VVI pacing at a rate which is substantially greater than the pacing rate PR, for example, $1.5-2.5 \times PR$. Following each delivered ventricular pacing pulse or sensed depolarization at 510, the device checks at 512 to determine whether atrial fibrillation has terminated . . . (column 10, lines 45-51).

In contrast to Applicant's claimed subject matter, *Warman* teaches immediately treating an atrial tachyarrhythmia upon detection and fails to teach Applicant's recited feature of delaying atrial pacing and atrial arrhythmia therapy during evaluation of detected high atrial interval rates and until an atrial episode is declared. It is noted that the delay period contemplated in the claims is defined in manner that precludes an interpretation that the subject delay period is an "inherent" circuit delay period, as was raised as a concern by the Examiner in the Response to Arguments section of the Office Action.

Warman fails to disclose, either expressly or inherently, all of the elements of Applicant's independent or dependent claims subject to rejection under 35 U.S.C. § 102(b). *Warman* further fails to render obvious the claims subject to rejection under 35 U.S.C. § 103(a). Applicant refers to the arguments presented above and in the prior response with respect to the anticipation and obviousness rejections.

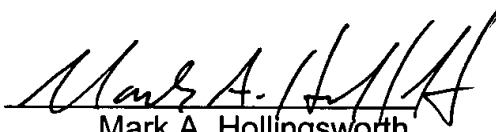
Appl. No. 09/827,763
Amdt. Dated April 16, 2004
Reply to Office Action of February 24, 2004

It is believed that the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicant's Representative, at the below-listed telephone number, if there are any questions regarding the above new claims or if prosecution of this application may be assisted thereby.

Respectfully submitted,
Crawford Maunu PLLC
1270 Northland Drive, Suite 390
St. Paul, MN 55120
(651) 686-6633 x104

Date: April 16, 2004

By:


Mark A. Hollingsworth
Reg. No. 38,491

MAH/kw